

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014497**Date Inspected:** 27-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

<b>CWI Name:</b>	Bernard Docena, Tom Pasqualone, Jesse Cayabyab			<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes	No	N/A	<b>Rod Oven in Use:</b>	Yes	No N/A
<b>Electrode to specification:</b>	Yes	No	N/A	<b>Weld Procedures Followed:</b>	Yes	No N/A
<b>Qualified Welders:</b>	Yes	No	N/A	<b>Verified Joint Fit-up:</b>	Yes	No N/A
<b>Approved Drawings:</b>	Yes	No	N/A	<b>Approved WPS:</b>	Yes	No N/A
				<b>Delayed / Cancelled:</b>	Yes	No N/A
<b>Bridge No:</b>	34-0006			<b>Component:</b>	SAS OBG	

**Summary of Items Observed:**

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 3W/4W-E, 1W/2W-D/S, 4W/5W and the following observations were made:

**1W/2W-D/S**

The QA Inspector randomly observed the SE QC Inspectors Jesse Cayabyab and Tom Pasqualone performing UT of the completed longitudinal stiffener welds. The QA Inspector noted the UT is in process.

**D/S#10**

The QA Inspector randomly observed the American Bridge/Fluor (ABF) welder identified as James Zhen excavating a UT rejection. The QA Inspector randomly observed and noted the area was previously indicated with a distinguishing marking directly on the weld which had been ground flush with the base material. The QA Inspector randomly observed the ABF welder excavate the UT rejection utilizing a burr bit grinder. Once the excavation was ground and blended to a weld able profile, the SE QC Inspector Jesse Cayabyab performed magnetic particle testing (MT) of the excavated area. The QA Inspector noted no relevant indications were located at the time of the testing. The QA Inspector performed random dimensional measurements of the excavated area and noted it was 90mm x 19mm x 12mm deep. The QA Inspector randomly observed the ABF welder preheat the isolated area of the excavation utilizing a rosebud torch. After the minimum required preheat was achieved, the QA Inspector noted the ABF welder began the shielded metal arc welding (SMAW) repair. The QA Inspector noted the ABF welder was performing the SMAW repair for the remainder of the QA Inspectors shift.

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D/S#5

The QA Inspector noted the ABF welder identified as Chun Fai Tsui was performing grinding in an attempt to excavate and remove the UT rejections previously located and indicated by the SE QC Inspectors. The QA Inspector noted the above identified longitudinal stiffener weld appeared to have two UT rejections. The QA Inspector noted the same excavation and MT inspections were performed as noted above. The QA Inspector performed random dimensional measurements of the excavated area and noted it was 85mm x 23mm x 16mm deep and 90mm x 24mm x 23mm deep. The QA Inspector noted both of the excavated areas appeared have been ground and blended to a weld able profile. The QA Inspector randomly observed the ABF welder preheat the isolated area of the excavation utilizing a rosebud torch. After the minimum required preheat was achieved, the QA Inspector noted the ABF welder began the shielded metal arc welding (SMAW) repair. The QA Inspector noted the ABF welder was performing the SMAW repair for the remainder of the QA Inspectors shift.

D/S#15/16

The QA Inspector randomly observed the SE QC Inspector Tom Pasqualone performing UT of the above identified longitudinal stiffener plates. The QA Inspector noted the QC Inspector was performing the UT of 100% of the total weld length for both of the above identified stiffener plates for the remainder of the QA Inspectors shift.

3W/4W-E2

The QA Inspector randomly observed the ABF welders identified as Song Tao Hunag and Jin Quan Huang setting up the flux cored arc welding (FCAW) equipment at the above identified location. Upon the arrival of the QA Inspector it was noted the induction heat blankets had not yet been turned on. The QA Inspector was noted the ABF welders intended to begin the FCAW root pass and production welding of the above identified weld joint. The SE QC Inspector identified as Bernard Docena informed the QA Inspector the fit up of the above identified weld joint was acceptable and ready for production welding. The QA Inspector performed a random visual and dimensional inspection of the completed fit up of the above identified weld joint. The QA Inspector noted the fit up appeared to be in general compliance after some minor grinding to open the root gap in two areas. After the grinding was complete the QA Inspector noted the weld joint appeared to meet the general requirements of the contract documents. The QA Inspector noted no production welding was performed on the QA Inspectors shift.

4W/5W-A

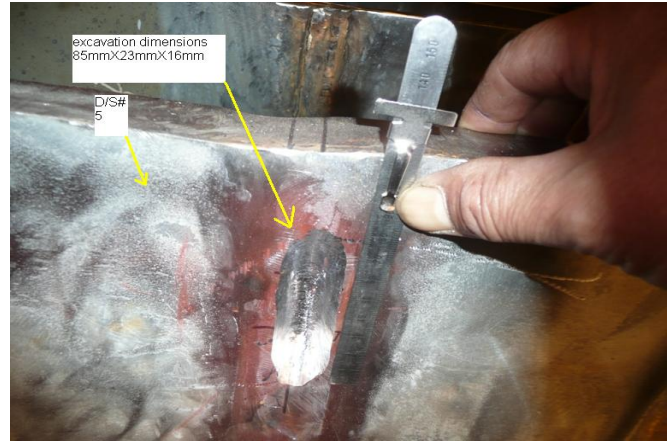
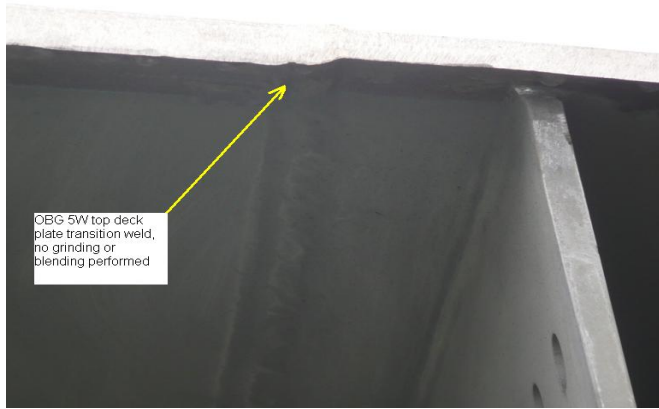
Upon the arrival of the QA Inspector it was observed the orthotropic box girder (OBG) identified as 5W was set on the temporary trestle approximately two meters from the OBG 4W. The QA Inspector noted no erection or fabrication was performed on this date for the above identified weld joint. The QA Inspector noted as previously informed by the ABF engineer John Callaghan and ABF Welding Quality Control Manager (WQCM) Jim Bowers, the grinding and blending of the longitudinal deck weld reinforcement as well as the top deck transition welds are to be performed at pier 7. The QA Inspector noted the additional grinding or blending of the weld reinforcement to ensure the steel backing bar fits with intimate contact with the top deck plate was to be performed at pier 7 prior to the OBG arriving on the job site. The QA Inspector performed a random visual inspection of the weld reinforcement of the longitudinal deck welds as well as the top deck transition welds, and noted no such grinding appeared to have been performed. The QA Inspector did noted the longitudinal stiffener plates to be welded under the barrier rails appeared to be have been ground and beveled upon arrival.

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## Summary of Conversations:

As noted above.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

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**Inspected By:** Bettencourt,Rick

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer